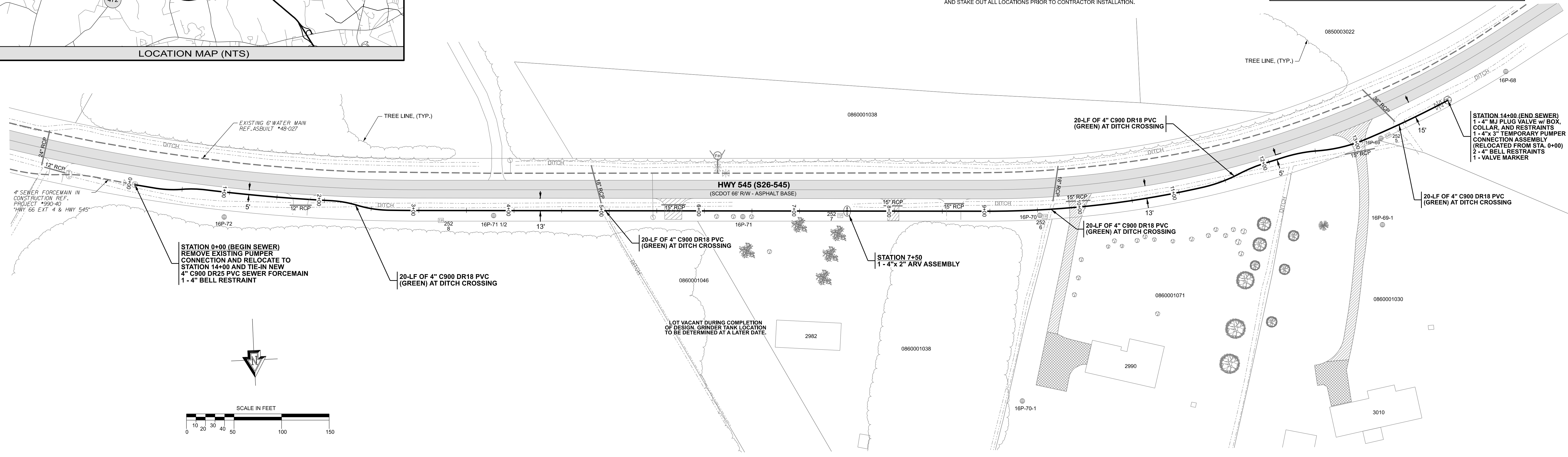


LOCATION MAP (NTS)

1. WORK WITHIN PUBLIC RIGHT-OF-WAYS OR PRIVATE EASEMENTS SHALL BE ACCOMPLISHED BY THE CONTRACTOR ACCORDING TO THE REQUIREMENTS OR CONDITIONS OF THE ENCROACHMENT PERMIT OR OTHER LEGAL DOCUMENTS AS THOUGH DOCUMENTS WERE ISSUED IN THE CONTRACTOR'S NAME. THE CONTRACTOR SHALL MAINTAIN COPIES OF THESE DOCUMENTS ON THE SITE AT ALL TIMES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF PUBLIC RIGHTS-OF-WAY DURING CONSTRUCTION OF THE PROJECT AND UNTIL THE CONTRACTOR OBTAINS AND DELIVERS TO THE OWNER A WRITTEN SIGN-OFF FROM HORRY COUNTY AND/OR THE S.C.D.O.T. THAT THE PUBLIC AGENCY HAS ACCEPTED THE RIGHT-OF-WAY BACK FOR MAINTENANCE. FINAL PAYMENT AND RELEASE OF RETAINAGE WILL NOT BE MADE TO THE CONTRACTOR UNTIL WRITTEN SIGN-OFF HAS BEEN OBTAINED FROM THE APPROPRIATE PUBLIC AGENCY AND PROVIDED TO THE OWNER.
2. PROVISIONS SHALL BE MADE TO PREVENT EROSION AND SILTATION CAUSED BY CONSTRUCTION. TEMPORARY GRASSING, HAY BALES, SILT FENCES OR OTHER METHODS, AS CALLED FOR ON THE PLAN OR THAT MAY BE REQUIRED, SHALL BE USED.
3. DISTANCES SHOWN ON THE PLAN FOR THE DESIGNATED LOCATION OF THE PROPOSED LINE WHICH MAY BE FROM THE EDGE OF PAVEMENT OR OTHERWISE SHOWN IS INTENDED ONLY AS A DESIRED LOCATION FOR THIS INSTALLATION. HOWEVER, SHOULD A CONFLICT OCCUR AND/OR DUE TO UNFORESEEN OR OTHER UTILITIES DISCOVERED THAT ARE IN CONFLICT, IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE FOR ANY AND ALL INSTALLATIONS AND DEVIATIONS OF ALIGNMENT NECESSARY TO ACHIEVE A CHANGED AND SATISFACTORY LOCATION FOR THIS INSTALLATION. THE INSTALLATION COSTS THAT MAY OCCUR DUE TO ALIGNMENT CHANGES ARE CONSIDERED TO BE A PART OF THE PRICE SUBMITTED FOR PIPE INSTALLATION AND NO ADDITIONAL COMPENSATION IS ALLOWED. THE FINAL LOCATION SELECTED FOR INSTALLATION BY THE CONTRACTOR OTHER THAN WHAT IS SHOWN ON THE PLANS SHALL BE FIRST APPROVED BY THE AUTHORITY PRIOR TO PROCEEDING WITH THE WORK AND ACTUAL INSTALLATION. THE CONTRACTOR WILL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND EXISTENCE OF ALL UNDERGROUND UTILITIES BOTH PRIOR TO THE BID SUBMITTAL AND DURING CONSTRUCTION. LOCATION OF UTILITIES AS TENTATIVELY SHOWN ON THE PLANS, WHETHER FULLY AND CORRECTLY LOCATED OR PARTIALLY AND/OR INCORRECTLY LOCATED OR OMITTED WILL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OR LIABILITY FOR PROVIDING FOR ANY DEVIATION FROM THE PLANNED LOCATION AND FOR THE COMPLETE INSTALLATION AND/OR DAMAGE TO OTHER UTILITIES. THE CONTRACTOR WILL BE RESPONSIBLE FOR CONTACTING LOCAL

- UTILITIES FOR ASSISTANCE IN LOCATING UTILITIES BOTH PRIOR TO BID PROPOSALS AND DURING INSTALLATIONS. THE CONTRACTOR MUST FULLY COMPLY WITH THE SOUTH CAROLINA UNDERGROUND UTILITIES DAMAGE PREVENTION ACT, GENERAL STATUTES 88-35, SECTIONS 20 THROUGH 120 AND ALL APPLICABLE STATUTES AND STATE APPROVED REQUIREMENTS.
4. WHEN THE CONTRACTOR IS UNABLE TO COMPLETE HIS WORK AS SHOWN ON THE PLANS BECAUSE OF AN EXISTING UTILITY, CONTRACTOR SHALL STAKE THE LOCATION OF THE UTILITY PRIOR TO PROCEEDING AND CONTACT THE ENGINEER.
5. THE CONTRACTOR SHALL NOTIFY ALL PUBLIC AGENCIES, THE OWNER, THE ENGINEER AND ALL OTHER CONCERNED PARTIES WHEN CONSTRUCTION IS TO COMMENCE SO THAT INSPECTIONS AND OTHER SITE VISITS MAY BE SCHEDULED.
6. DATA REQUIRED FOR PREPARATION OF AS-BUILT DRAWINGS SHALL BE OBTAINED BY THE CONTRACTOR AT THE TIME OF INSTALLATION. THIS DATA SHALL BE ACCUMULATED BY THE CONTRACTOR AND COORDINATED WITH THE PROJECT INSPECTOR ON A DAILY BASIS DURING THE CONSTRUCTION PERIOD AND BE SUBMITTED TO THE PROJECT INSPECTOR IN A NEAT AND LEGIBLE MANNER AFTER COMPLETION OF THE PROJECT.
7. ALL MATERIALS AND/OR INSTALLATION, UNLESS OTHERWISE NOTED, SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE AUTHORITY'S WATER AND SEWER STANDARDS AND SPECIFICATIONS, AND WHERE APPLICABLE, ALL FEDERAL, SOUTH CAROLINA AND LOCAL ORDINANCES, REGULATIONS, SPECIFICATIONS AND PERMITS.
8. SPECIAL NOTE: PRIOR TO ANY EXCAVATION THE CONTRACTOR IS REQUIRED TO CONTACT HORRY TELEPHONE COOPERATIVE FOR CABLE LOCATIONS AT 365-2151. THIS PROJECT HAS SEVERAL CABLES OFF EDGE OF PAVEMENT THAT THE CONTRACTOR WILL BE REQUIRED TO LOCATE AND EXPOSE PRIOR TO THE INSTALLATION OF ANY MATERIALS.
9. REPLACE IN KIND ALL AREAS PROPERTY OWNER HAS DEVELOPED SPECIAL GRASS, TURF, OR LANDSCAPING. ALL DISTURBED AREAS ARE TO BE RAKED AND SEEDED.
10. FINAL LOCATION AND SIZE OF E-ONE GRINDER PUMP STATIONS AND WATER SERVICES SHALL BE DETERMINED BY GSWSA. LOCATION OF PUMP STATIONS AND WATER SERVICES SHOWN ON PLANS ARE TENTATIVE AND SUBJECT TO CHANGE. GSWSA SHALL DETERMINE AND STAKE OUT ALL LOCATIONS PRIOR TO CONTRACTOR INSTALLATION.

LEGEND (APPLIES TYPICALLY THROUGHOUT PLAN SHEETS)	
DIRT/GRASS DRIVEWAY	WATER OR SEWER AIR RELEASE VALVE
COQUINA/GRAVEL DRIVEWAY	SEWER FM PUMPER CONNECTION ASSEMBLY
CONCRETE DRIVEWAY	SEWER FM PLUG VALVE
ASPHALT DRIVEWAY	SEWER MANHOLE
REINFORCED CONCRETE PIPE (RCP)	SEWER LIFT STATION
TELEPHONE PEDESTAL	SEWER S.T.E.P. TANK
T.V. CABLE PEDESTAL	SEWER GRINDER PUMP STATION
ELECTRIC POWER POLE	WATER FIRE HYDRANT
U.G. ELECTRIC TRANSFORMER	WATER POST HYDRANT
GAS MAIN	WATER BLOW-OFF ASSY
TELEPHONE/TV CABLE	WATER GATE VALVE
FIBER OPTIC CABLE	WATER/SEWER REDUCER
CATCH BASIN	WATER SERVICE METER
WATER WELL HOUSE	CUSTOMER TO RECEIVE WATER AND/OR SEWER SERVICE



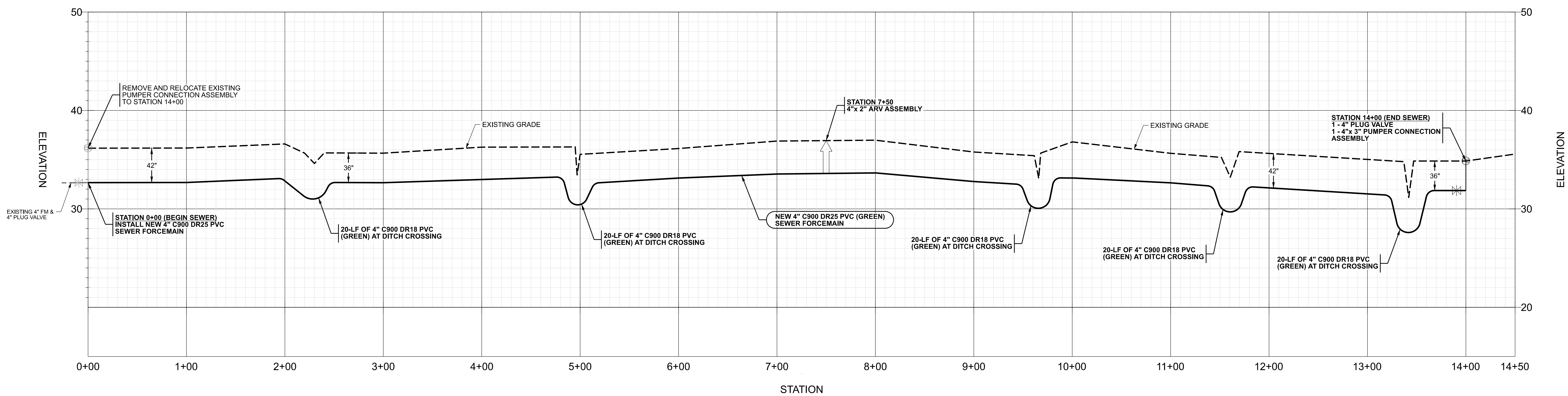
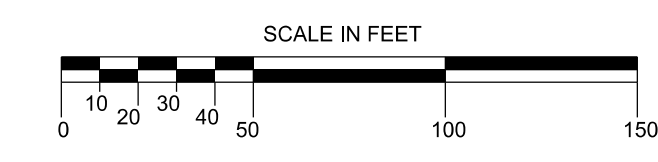
STATION 0+00 (BEGIN SEWER)
REMOVE EXISTING PUMPER CONNECTION AND RELOCATE TO STATION 14+00 AND TIE-IN NEW 4" C900 DR25 PVC SEWER FORCE MAIN
1 - 4" BELL RESTRAINT

20-LF OF 4" C900 DR18 PVC (GREEN) AT DITCH CROSSING

STATION 7+50
1 - 4" x 2" ARV ASSEMBLY

20-LF OF 4" C900 DR18 PVC (GREEN) AT DITCH CROSSING

STATION 14+00 (END SEWER)
1 - 4" M.J. PLUG VALVE w/ BOX, COLLAR, AND RESTRAINTS
1 - 4" x 3" TEMPORARY PUMPER CONNECTION ASSEMBLY (RELOCATED FROM STA. 0+00)
2 - 4" BELL RESTRAINTS
1 - VALVE MARKER

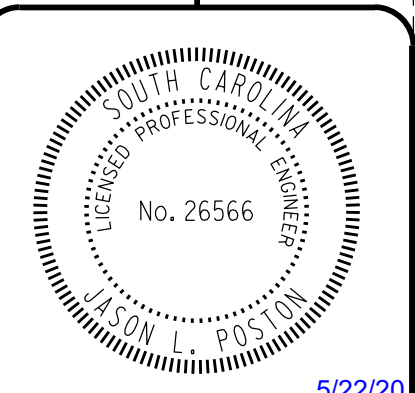


STATION
Hwy 545

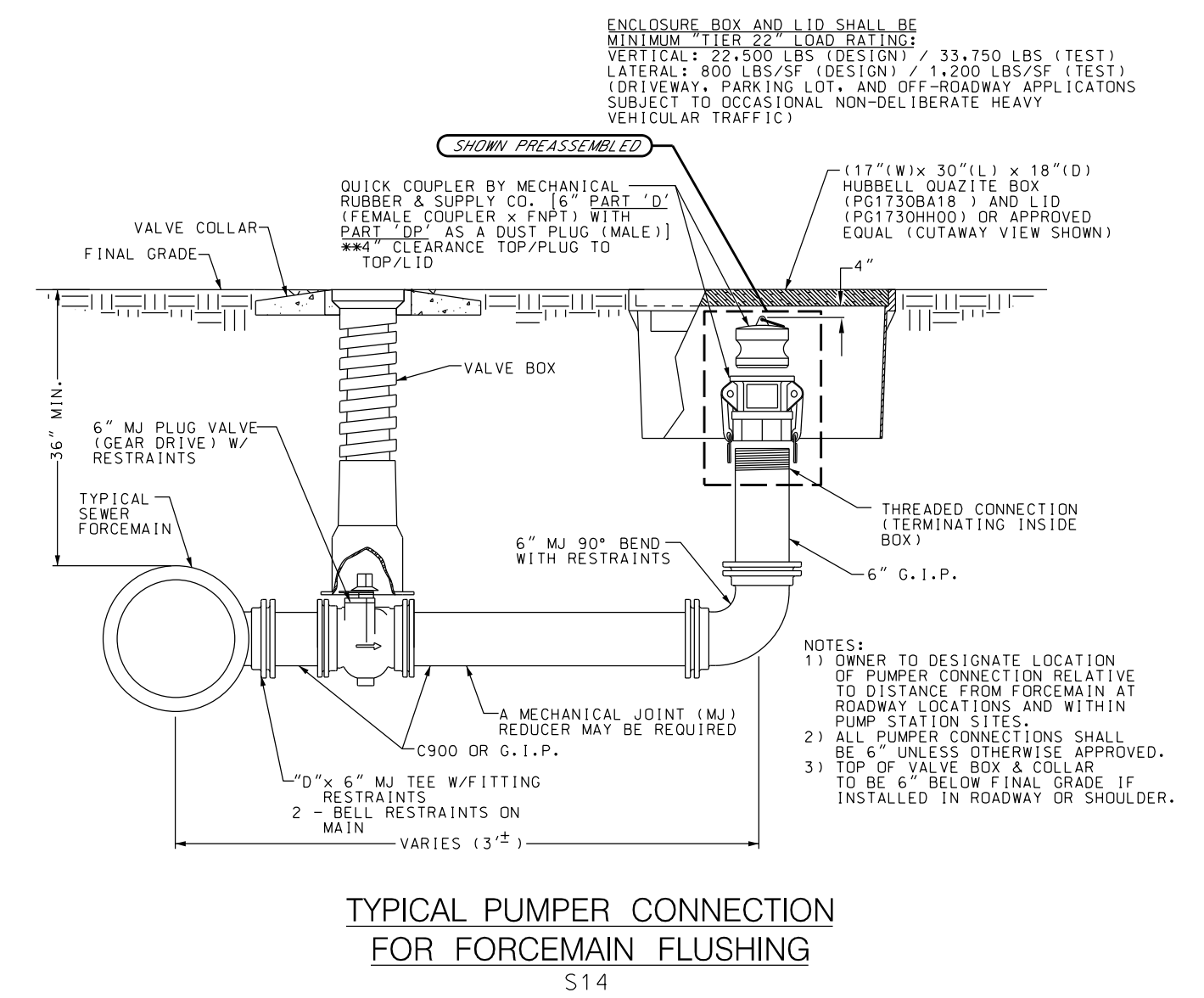
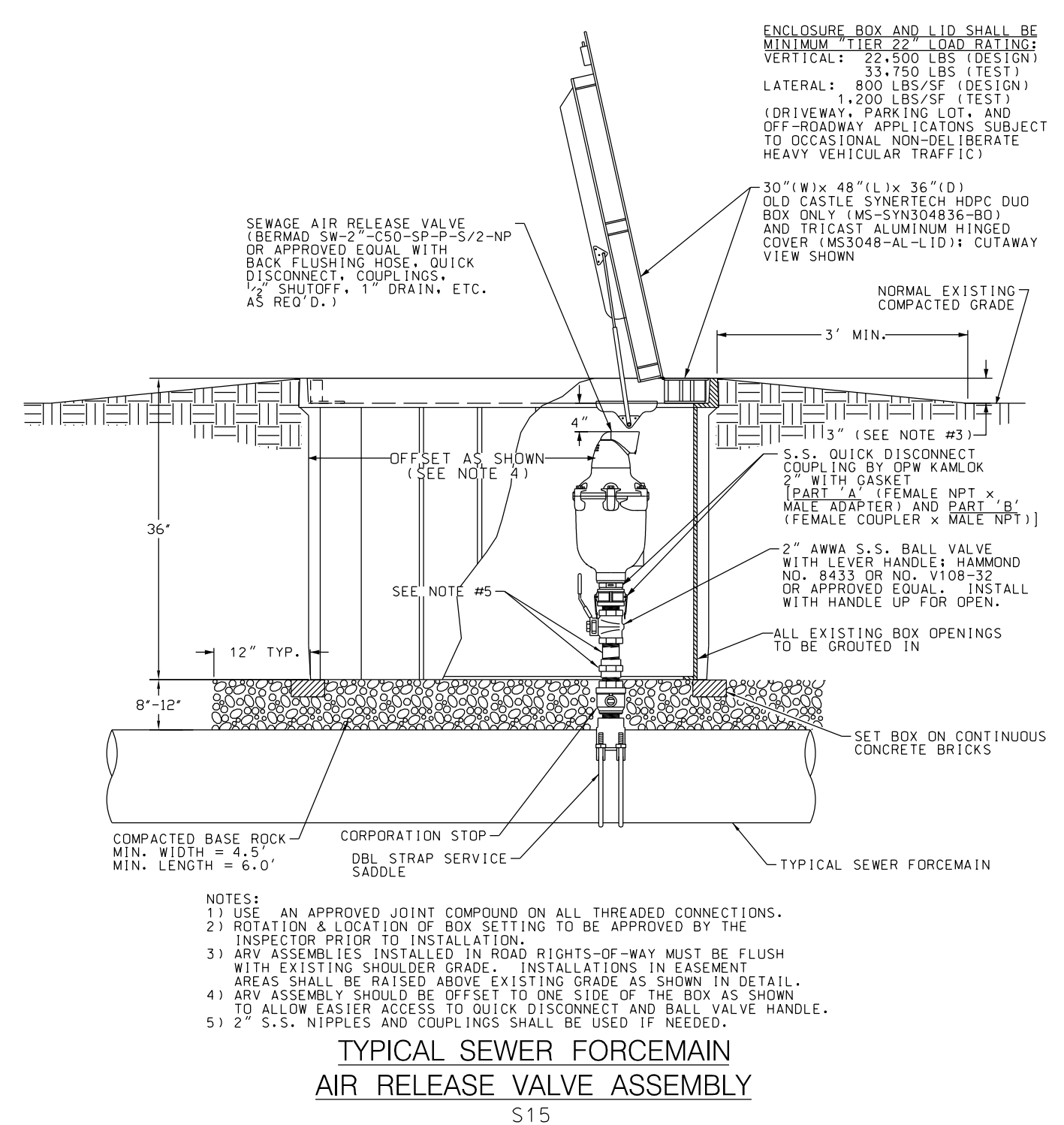
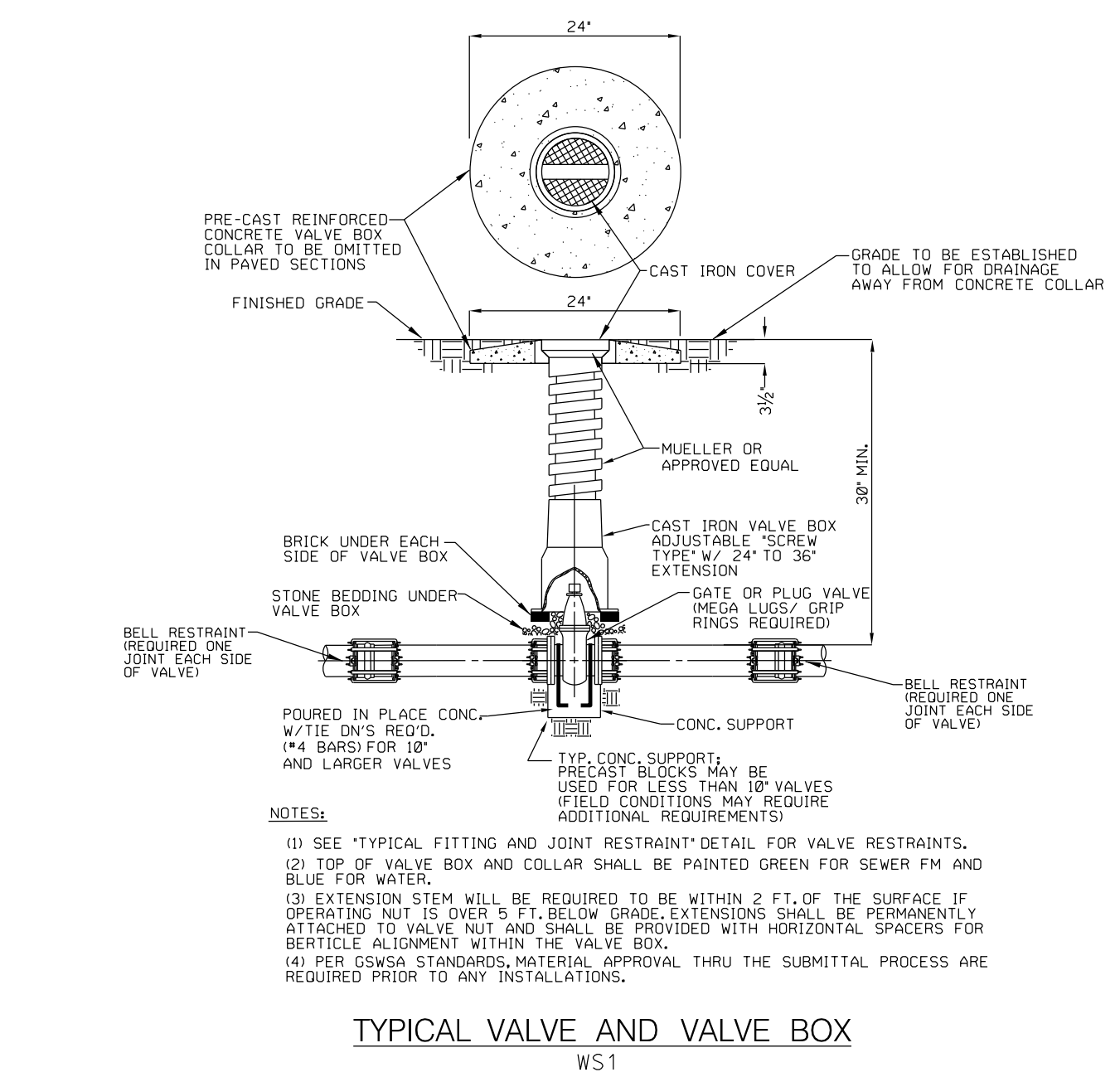
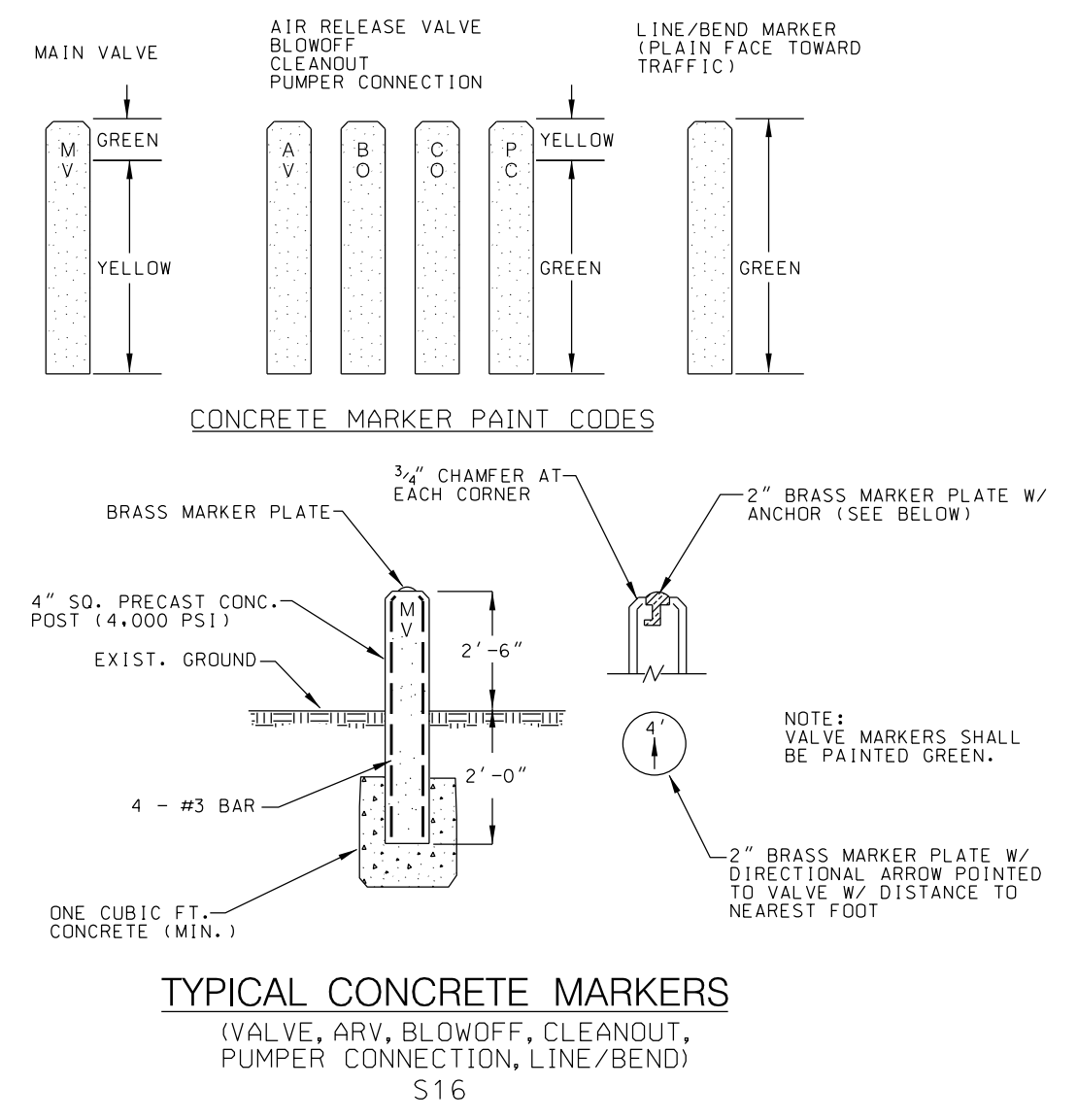
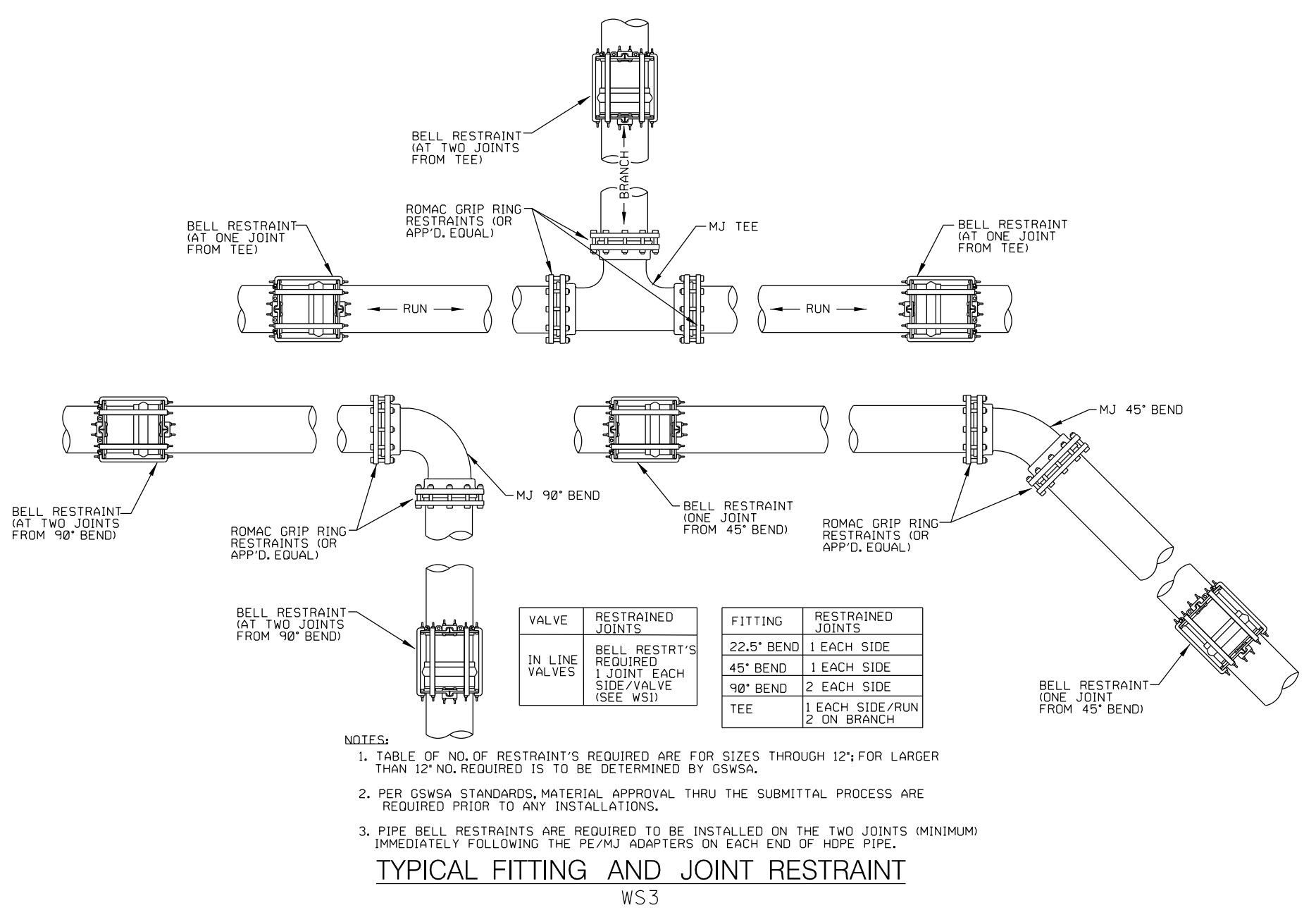
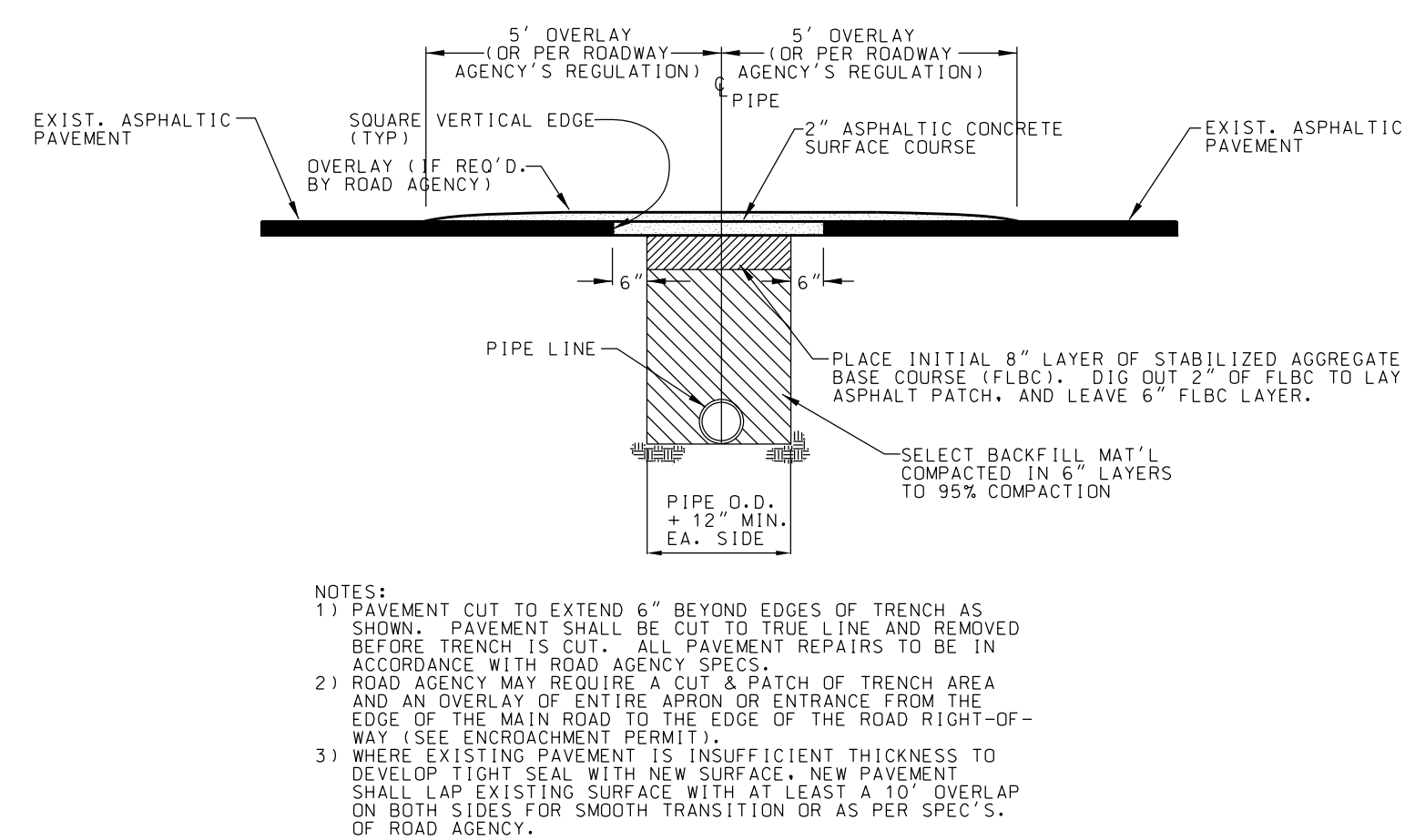
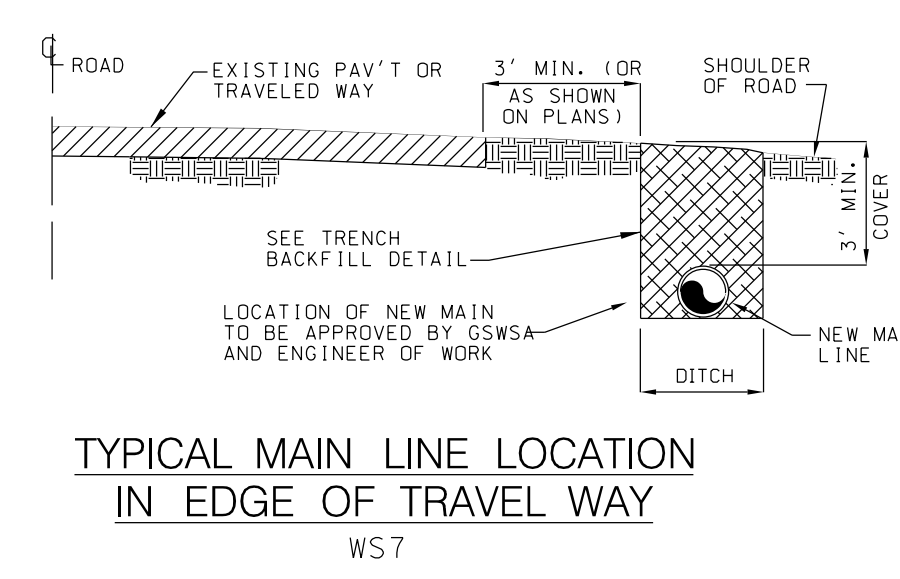
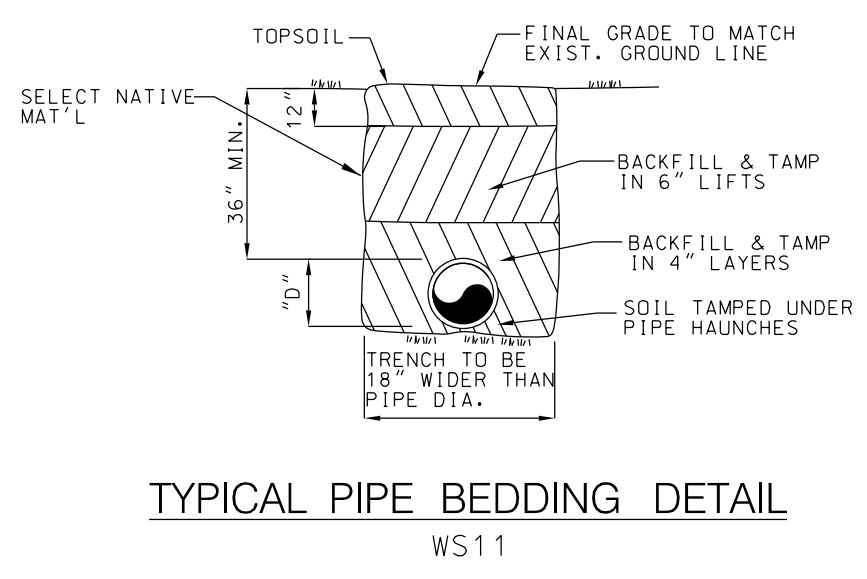
REVISION	DATE

GRAND STRAND WATER & SEWER AUTHORITY
 166 JACOBSON BLUFF RD.
 P.O. BOX 2368
 CONWAY, SC 29526-2368
 (803) 343-6800 FAX: 803-343-4641
 E-MAIL: GSWSA@GSA.COM

**HWY 545 EXT 1
RURAL SEWER PROJECT
(ALONG HWY 545 OFF HWY 66)**
 CONT. #S144-19 / PROJ. #990-58



DATE: MAY 2020
SCALE: AS SHOWN
FILENAME: DGN Hwy 545 Ext 1 (S144-19).dgn
DESIGNED BY: LUIS MARIN
CHECKED BY: JASON L. POSTON
APPROVED BY: JASON L. POSTON, PE #26566



DATE: _____

BY: _____

REVISION: _____

GRAND STRAND WATER & SEWER AUTHORITY

166 JACKSON BLUFF RD.
CONWAY, SC 29526-2668
(843) 347-6888 FAX: 843-347-4641
E-MAIL: GSWSA@GMAIL.COM

HWY 545 EXT 1

RURAL SEWER PROJECT

(ALONG HWY 545 OFF HWY 66)

CONT. #S144-19 / PROJ. #990-58

DATE: MAY 2020

SCALE: N.T.S.

FILENAME: DGN_Hwy 545 Ext 1 (S144-19).dgn

DESIGNED BY: LUIS MARIN

CHECKED BY: JASON L. POSTON

APPROVED BY: _____

JASON L. POSTON, PE #26566

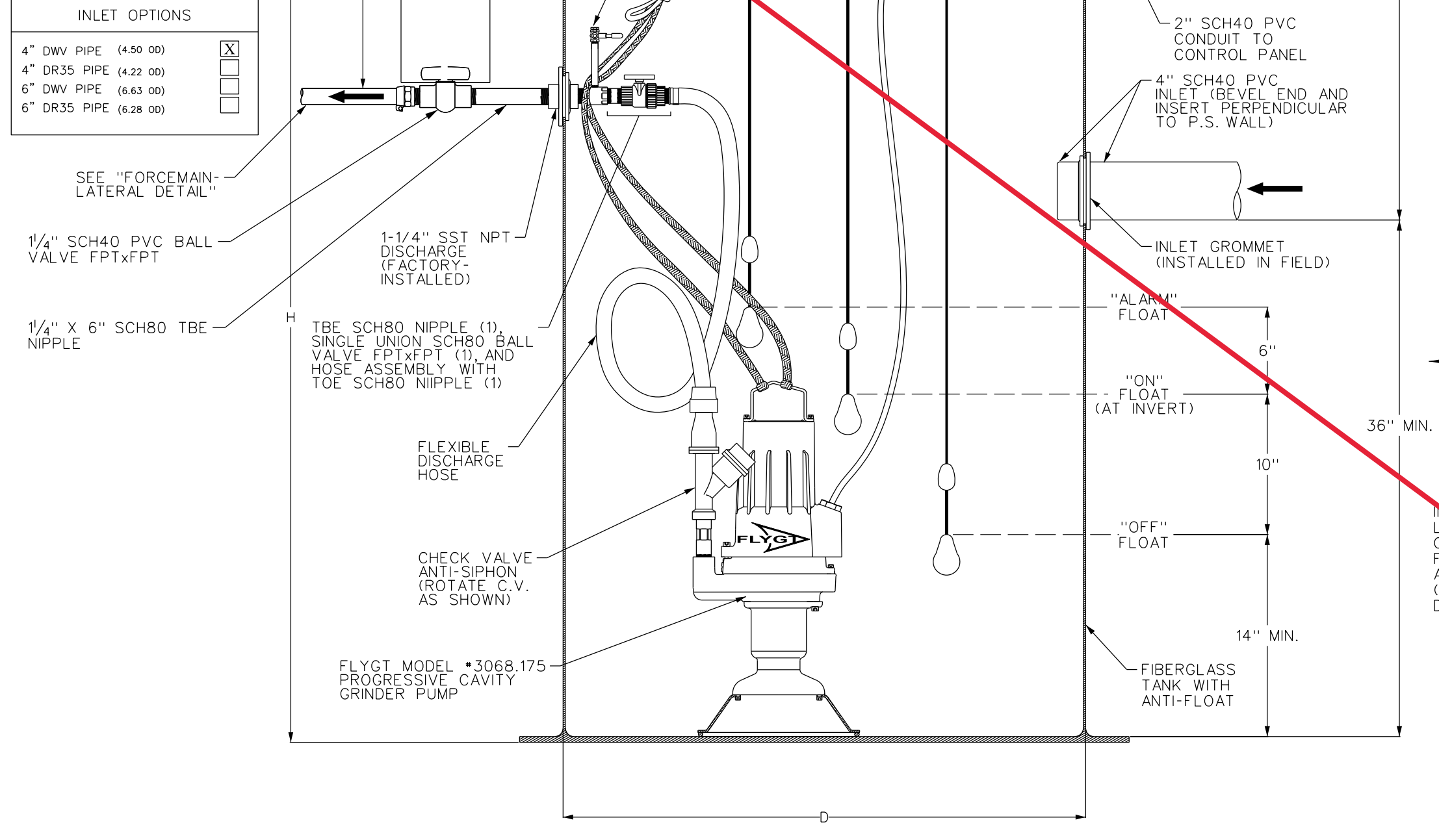
SHEET **2** OF 3

5/22/20

DIAMETER "O"	SMPLX STATIONS
30	<input type="checkbox"/>
36	<input type="checkbox"/>
42	<input type="checkbox"/>
48	<input type="checkbox"/>

HEIGHT	COVER OVER DISCHARGE (COO)
18	<input type="checkbox"/>
24	<input type="checkbox"/>
30	<input type="checkbox"/>
36	<input type="checkbox"/>
42	<input type="checkbox"/>
48	<input type="checkbox"/>
54	<input type="checkbox"/>
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108	<input type="checkbox"/>
114	<input type="checkbox"/>
120	<input type="checkbox"/>
126	<input type="checkbox"/>
132	<input type="checkbox"/>
138	<input type="checkbox"/>
144	<input type="checkbox"/>

ALL MEASUREMENTS IN INCHES (")



FLYGT OR APPROVED EQUAL

- GENERAL NOTES:**
- SITE AND FINAL LOCATION FOR PUMP STATION AND ELECTRICAL SERVICE TO BE APPROVED BY ENGINEER OF WORK PRIOR TO INSTALLATION.
 - ALL INSTALLATIONS TO BE IN CONFORMANCE WITH GSWSA ADOPTED STANDARDS AND POLICIES.
 - BACKFILL AT PUMP STATION SHALL BE SAND, LOAM, OR A SUITABLE IMPORTED MATERIAL AND/OR CLEAN NATIVE EARTH, FREE OF ROCKS, ROOTS, ORGANIC MATTER, AND FOREIGN OBJECTS AND SHALL BE THOROUGHLY COMPACTED IN LIFTS NOT EXCEEDING 12" TO FINAL PROCTOR DENSITY OF NOT LESS THAN 90%. THE GRINDER PUMP SHALL BE INSTALLED AT A MINIMUM DEPTH AS SPECIFIED FROM GRADE TO THE TOP OF THE INFLUENT LINE. THE FINISH GRADE LINE SHALL BE BELOW THE TOP OF THE ACCESSWAY TO MARKED PUMP STATION BURY LINE. FINAL GRADE SHALL SLOPE AWAY FROM THE GRINDER UNIT.
 - ALL RESTORATION AND CORRECTION WORK WILL BE THE RESPONSIBILITY OF THE INSTALLING CONTRACTOR.
 - FLOATS & POWER CABLE
 - FLOATS/POWER CABLE HANGER SHALL BE MOUNTED APPROXIMATELY 2" FROM TOP OF PS (SEE DETAIL).
 - USE ONLY ONE FLOAT CABLE PER HANGER HOOK. FLOAT CABLES SHOULD BE DOUBLE-LOOPED AND TIED WITH CABLE TIES TO PREVENT SLIPPAGE.
 - CUT OFF EXCESS LENGTH OF POWER AND FLOAT CABLES, BUT LEAVE ENOUGH LENGTH TO BE ABLE TO PULL THE PUMP OUT AND SET ON THE GROUND BESIDE THE PS PRIOR TO PULLING THE FLOAT AND POWER CABLES THROUGH THE CONDUIT AND MAKING THE FINAL HOOKUP. AN ELECTRICAL CHECK SHOULD BE CONDUCTED ON THE PS FLOATS TO ENSURE PROPER WORKING ORDER.
 - PRIOR TO PUMP INSTALLATION, EXERCISE THE PUMP CUTTER HEAD WITH AN ALLEN WRENCH AND PLENTIFUL AMOUNT OF DISH DETERGENT UNTIL THE CUTTER HEAD CAN BE TURNED EASILY BY HAND.
 - WHEN INSTALLING THE DISCHARGE PIPE AND CHECK VALVE TO THE PUMP, TURN THE CHECK VALVE SO THAT IT CHECKS THE SIDE OF THE PUMP.
 - PUMP STATION SHOULD BE INSTALLED AS LEVEL AS POSSIBLE. NOT EXCEEDING A SLOPE OF 1/2" OVER A 24". ADJUSTING THE PUMP STATION SHALL ONLY BE ACCOMPLISHED BY ADJUSTING THE CONCRETE ANCHOR, NEVER BY PUSHING OR PULLING ON THE PUMP STATION.
 - POSITION THE PUMP SO THE INFLUENT DOES NOT DISCHARGE DIRECTLY ON THE PUMP TO KEEP SOLIDS FROM COLLECTING ON TOP OF IT.
 - POSITION THE POWER AND FLOAT CABLES, CABLE HANGER AND ELECTRICAL CONDUIT ENTRANCE SO THE CABLES DO NOT SPAN ACROSS THE PUMP LIFT-OUT AREA. ALSO POSITION THESE ITEMS AND THE PUMP LIFTING ROPE SO THE FLOATS DO NOT REST UPON OR GET ENTANGLED WITH ANYTHING. IF POSSIBLE POSITION THE 1-1/4" DISCHARGE AT 12 O'CLOCK AND THE INFLUENT PIPE AT 6 O'CLOCK.
 - BOTH LOOPED ENDS OF THE PUMP LIFTING ROPE SHOULD BE ATTACHED TO THE PUMP LIFTING HANDLE. EXCESS ROPE SHOULD BE TIED OR KNOTTED NEATLY AND LOOPED OVER THE DISCHARGE PIPE AT THE PRESSURE READING CONNECTION IN A MANNER SO AS NOT TO FALL DOWN INTO THE INFLUENT.

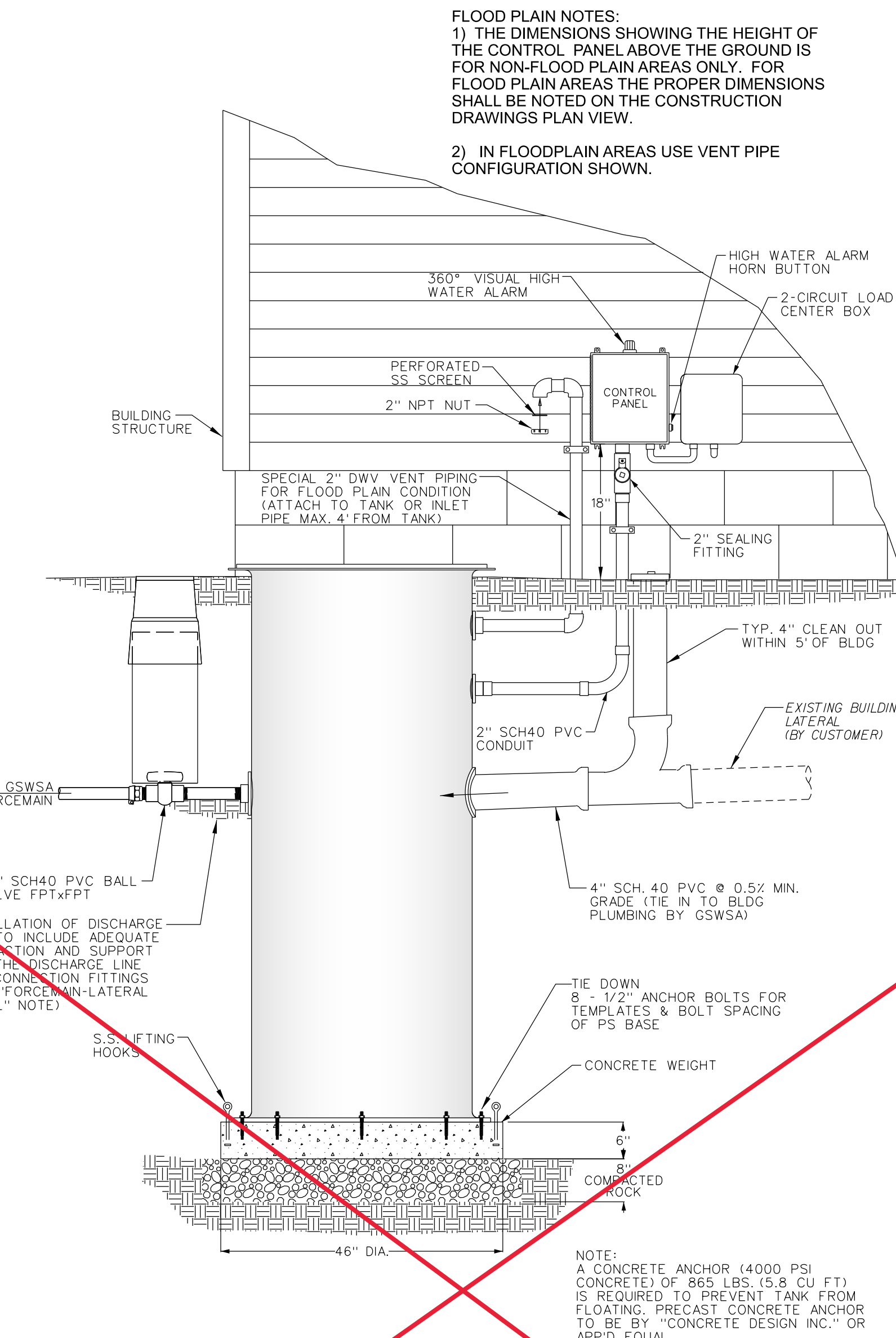
Flygt M 3068 Progressive Cavity Grinder Pump

Performance data

Technical data

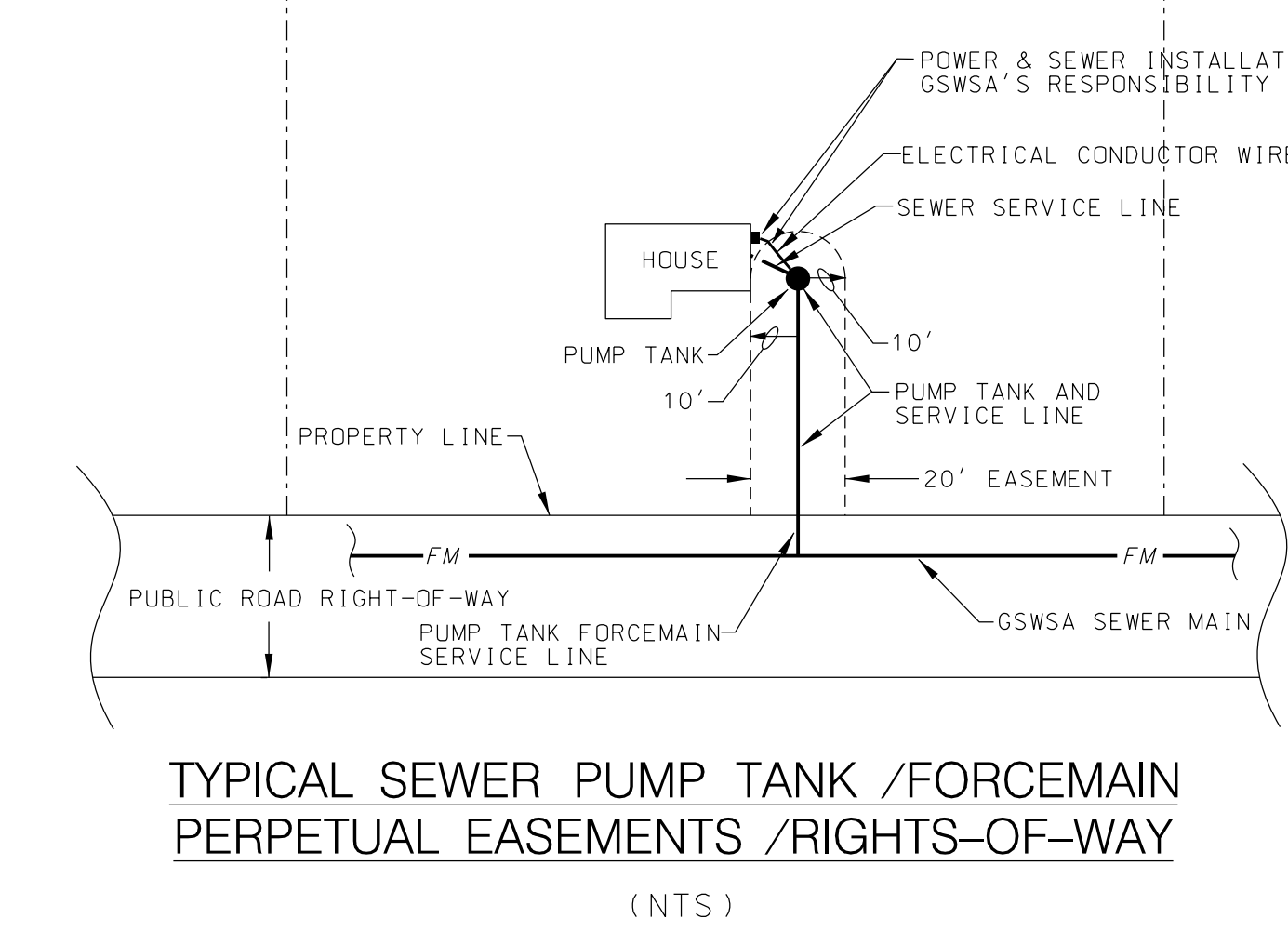
Impeller No.	M 3068.175
Discharge	1.5"
Rated power	1.7HP
Number of phases	3
Voltage	230
Rated current (A)	8.1
Weight	84 lbs.

FLYGT PUMP PERFORMANCE & TECHNICAL DATA



P.S. PROFILE SECTION
ANTI-FLOTATION COLLAR, PANELS
PEDESTAL AND VENTILATION DETAIL

Tank & Electrical items are NOT Part of Contract



TYPICAL SEWER PUMP TANK /FORCEMAIN PERPETUAL EASEMENTS /RIGHTS-OF-WAY (NTS)

UNLESS OTHERWISE SPECIFIED GSWSA SHALL INSTALL ALL ELECTRICAL COMPONENTS PER GSWSA'S RURAL SEWER PROGRAM POLICY INCLUDING PS CONTROL PANEL AND 2-CIRCUIT LOAD CENTER BOX.

Labels include: CONTROL PANEL, 2" SEALING FITTING, 18" FROM BOTTOM OF CONTROL PANEL TO GROUND IN NON-FLOODPLAIN, 24" MIN., WIRE LENGTH UP TO 150' WIRE GAUGE #12'S UP TO 150' OVER 150' #8'S UP TO WG, 0.40 PRESSURE TREATED POST (4" x 6"), 2-CIRCUIT LOAD CENTER (BREAKER BOX), 4" x 6" TREATED POST, 2" SEALING FITTING, 2" NYLON ELECTRICAL COUPLING (AK INDUSTRIES OR APPROVED EQUAL), FINISHED GRADE, FIBERGLASS LID, FLOAT HANGER (SST) (ONE FLOAT CABLE PER HANGER HOOK; DOUBLE LOOP AND TIE WITH CABLE TIE TO PREVENT SLIPPAGE), MUSHROOM VENT (INSTALLED IN FIELD), 7" ROUND VALVE BOX, 6" C900 DR25 PVC PIPE, 2" SCH40 PVC CONDUIT TO CONTROL PANEL, LIFTING ROPE (NEATLY TIE EXCESS ROPE), 2" SCH40 PVC INLET (BEVEL END AND INSERT PERPENDICULAR TO P.S. WALL), INLET GROMMET (INSTALLED IN FIELD), "ALARM" FLOAT, "ON" FLOAT (AT INVERT), "OFF" FLOAT, FIBERGLASS TANK WITH ANTI-FLOAT, CHECK VALVE ANTI-SIPHON (ROTATE C.V. AS SHOWN), FLYGT MODEL 3068.175 PROGRESSIVE CAVITY GRINDER PUMP, FLEXIBLE DISCHARGE HOSE, TBE SCH80 NIPPLE (1) SINGLE UNION SCH80 BALL VALVE FPTxFT (1), AND HOSE ASSEMBLY WITH TOE SCH80 NIPPLE (1), SEE "FORCEMAIN LATERAL DETAIL", 1/4" SCH40 PVC BALL VALVE FPTxFT, 1-1/4" SST NPT DISCHARGE (IF APPLICABLE), 1/2" X 6" SCH80 TBE NIPPLE, 1/2" X 6" SCH80 TBE NIPPLE, 1/4" SCH40 PVC BALL VALVE FPTxFT, 1-1/4" SST NPT DISCHARGE (IF APPLICABLE).

ENCLOSURE LAYOUT

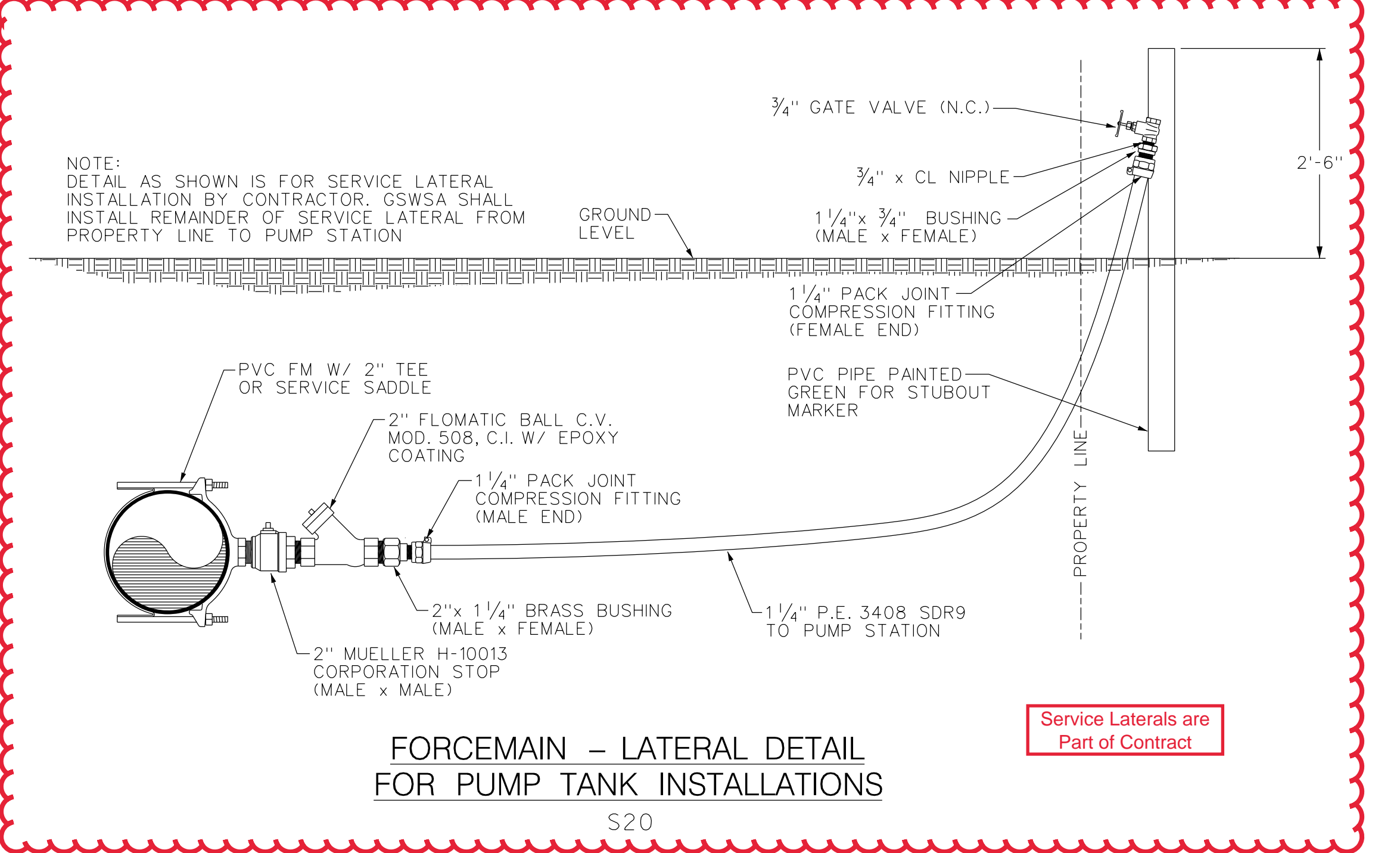
PANEL LAYOUT

BILL OF MATERIALS

ITEM	QTY	WFR	CAT. NUMBER	DESCRIPTION
CB1	1	EATON	QCR2025	PUMP
CB2	1	EATON	QCR1000	CIRCUIT BREAKER CONTROL
MS1	1	ABB	BP30C3P	MOTOR CONTACTOR
OL	1	FURNAS	48DA18A4	OVERLOAD
SK	1	FLYGT	14-500079	SINGLE PHASE START KIT
T1	1	ABB	ZET1C	TRANSFORMER
R1, 2	2	EATON	DSPR3T	CONTROL RELAY 24 VAC
R3	1	EATON	DSPR3A	CONTROL RELAY 120 VAC
SS1	1	GAMER	7152C	SWITCH: H-O-A
SS2	1	GAMER	7152C	SWITCH: ALARM TEST-OFF-ON
PL1	1	LITTLE LIGHT	980-670A-96-WGN	PILOT LIGHT: RUN
PB1	1	ABB	CP110011	GREEN PUSH BUTTON: HIGH LEVEL SILENCE
AL	1	INGRAM	LRX-40	FLASHING LIGHT: HIGH LEVEL ALARM
AB	1	FLOYD BELL	MC-09-201-C	ALARM BUZZER
1	1	ALLIED	BP-1412	PANEL
2	1	ALLIED	AMP42EL	NEMA 4X FIBERGLASS ENCLOSURE

THIS DRAWING IS THE PROPERTY OF BOLLAY FABRICATION, INC. DRAWING TO BE RETURNED UPON REQUEST. DATE 5-29-14. PREPARED FOR TENCARVA MACHINERY. MODEL NUMBER ORDER. PO Box 508 147-14th St. N. 13084. Phone 315-677-5247. 147 USA Approved Electrical Control Panels. Fax 315-677-5252.

STANDARD CONTROL PANEL FOR FLYGT PUMP TANK



Service Laterals are Part of Contract

REVISION BY DATE

REVISED CONTROL PANEL AND SCHEMATICS	DRT	2014-07-14
REVISED PS DISCHARGE CONNECTION	DRT	2014-10-28
CHANGED "OFF" FLOAT LEVEL	DRT	2015-07-23
CHANGED DISCHARGE BALL VALVE AND APPLIANCE	DRT	2015-08-10

GRAND STRAND WATER & SEWER AUTHORITY

166 JACKSON BLUFF RD.
CONWAY, SC 29526-2368
(803) 343-0808 FAX 803-343-4641
E-MAIL: GSWSA@GSA.COM

HWY 545 EXT 1 RURAL SEWER PROJECT (ALONG HWY 545 OFF HWY 66)

CONT. #S144-19 / PROJ. #990-58

DATE: MAY 2020
SCALE: N.T.S.
FILENAME: DGN_Hwy 545 Ext 1 (S144-19).dgn
DESIGNED BY: LUIS MARIN
CHECKED BY: JASON L. POSTON
APPROVED BY: JASON L. POSTON, PE #26566

SHEET **3** OF 3